

USMLE Step 3

1. A 45-year-old male comes to your office for his first annual checkup in the last 10 years. On first impression, he appears overweight but is otherwise healthy and has no specific complaints. He has a brother with diabetes and a sister with high blood pressure. Both of his parents are deceased and his father died of a stroke at age 73. He is a long-standing heavy smoker and only drinks alcohol on special occasions. On physical examination, his blood pressure is 166/90 in the left arm and 164/88 in the right arm. The rest of the examination is unremarkable. He is concerned about his health and does not want to end up on medication, like his siblings. Regarding your initial recommendations, which of the following would be most appropriate?

A. You should take no action and ask him to return to the clinic in 1 year for a repeat blood pressure check.

B. You should immediately start him on an oral antihypertensive medication and ask him to return to the clinic in 1 week.

C. You should advise him to stop smoking, start a strict diet and exercise routine with the goal of losing weight, and return to the clinic in 6 months.

D. You should consider starting a workup for potential causes of secondary hypertension.

E. You should screen him for diabetes and evaluate him for other cardiovascular risk factors before proceeding any further.

Answer(s): E

2. A 45-year-old male comes to your office for his first annual checkup in the last 10 years. On first impression, he appears overweight but is otherwise healthy and has no specific complaints. He has a brother with diabetes and a sister with high blood pressure. Both of his parents are deceased and his father died of a stroke at age 73. He is a long-standing heavy smoker and only drinks alcohol on special occasions. On physical examination, his blood pressure is 166/90 in the left arm and 164/88 in the right arm. The rest of the examination is unremarkable. He is concerned about his health and does not want to end up on medication, like his siblings. In the initial evaluation of a patient such as this, which of the following should be routinely recommended?

A. a urine microalbumin/creatinine ratio

B. an echocardiogram

C. thyroid function tests

D. renal function tests (serum creatinine and blood urea nitrogen [BUN])

E. an exercise stress test

Answer(s): D

3. A 42-year-old man without prior significant medical history comes to your office for evaluation of chronic diarrhea of 12 months duration, although the patient states he has had loose stools for many years. During this time he has lost 25 lbs. The diarrhea is large volume, occasionally greasy, and nonbloody. In addition, the patient has mild abdominal pain for much of the day. He has been smoking a pack of cigarettes a day for 20 years and drinks approximately five beers per day. His physical examination reveals a thin male with temporal wasting and generalized muscle loss. He has glossitis and angular cheilosis. He has excoriations on his elbows and knees and scattered papulovesicular lesions in these regions as well. Which of the following is the best test to confirm the suspected diagnosis?

A. abdominal CT scan with contrast

B. small bowel x-ray

C. esophagogastroduodenoscopy with small bowel biopsy

D. colonoscopy with colonic biopsy

E. 72-hour fecal fat quantification

Answer(s): C

4. A 42-year-old man without prior significant medical history comes to your office for evaluation of chronic diarrhea of 12 months duration, although the patient states he has had loose stools for many years. During this time he has lost 25 lbs. The diarrhea is large volume, occasionally greasy, and nonbloody. In addition, the patient has mild abdominal pain for much of the day. He

has been smoking a pack of cigarettes a day for 20 years and drinks approximately five beers per day. His physical examination reveals a thin male with temporal wasting and generalized muscle loss. He has glossitis and angular cheilosis. He has excoriations on his elbows and knees and scattered papulovesicular lesions in these regions as well. What is the most serious long-term complication this patient could face?

A. pancreatic cancer

B. small bowel cancer

C. gastric cancer

D. colon cancer

E. rectal cancer

Answer(s): B

5. A 24-year-old male medical student is admitted to the hospital for the evaluation of a 3-month history of bloody stools. The patient has approximately six blood stained or blood streaked stools per day, associated with relatively little, if any, pain. He has not had any weight loss, and he has been able to attend classes without interruption. He denies any fecal incontinence. He has no prior medical history. Review of systems is remarkable only for occasional fevers and the fact that the patient quit smoking approximately 8 months ago. A colonoscopy is performed and reveals a granular, friable colonic mucosal surface with loss of normal vascular pattern from the anal verge to the hepatic flexure of the colon. Biopsies reveal prominent neutrophils in the epithelium and cryptitis with focal crypt abscesses, and no dysplasia. The patient is diagnosed with ulcerative colitis. Which of the following is the best initial treatment for this patient?

A. colectomy

B. oral prednisone

C. oral metronidazole

D. cortisone enemas

E. intravenous cyclosporine

Answer(s): B

6. A 24-year-old male medical student is admitted to the hospital for the evaluation of a 3-month history of bloody stools. The patient has approximately six blood stained or blood streaked stools per day, associated with relatively little, if any, pain. He has not had any weight loss, and he has been able to attend classes without interruption. He denies any fecal incontinence. He has no prior medical history. Review of systems is remarkable only for occasional fevers and the fact that the patient quit smoking approximately 8 months ago. A colonoscopy is performed and reveals a granular, friable colonic mucosal surface with loss of normal vascular pattern from the anal verge to the hepatic flexure of the colon. Biopsies reveal prominent neutrophils in the epithelium and cryptitis with focal crypt abscesses, and no dysplasia. The patient is diagnosed with ulcerative colitis.

While on the inpatient service, the patient is noted to have a serum alkaline phosphatase of 380 U/L and a bilirubin of 2.4 mg/dL. An ERCP is performed, and the following cholangiogram is obtained. In addition to ulcerative colitis, the patient likely has what other illness?



A. primary biliary cirrhosis

B. Wilson disease

C. alpha-1 antitrypsin deficiency

D. hereditary hemochromatosis

E. primary sclerosing cholangitis (PSC)

Answer(s): E

7. A 24-year-old male medical student is admitted to the hospital for the evaluation of a 3-month history of bloody stools. The patient has approximately six blood stained or blood streaked stools per day, associated with relatively little, if any, pain. He has not had any weight loss, and he has been able to attend classes without interruption. He denies any fecal incontinence. He has no prior medical history. Review of systems is remarkable only for occasional fevers and the fact that the patient quit smoking approximately 8 months ago. A colonoscopy is performed and reveals a granular, friable colonic mucosal surface with loss of normal vascular pattern from the anal verge to the hepatic flexure of the colon. Biopsies reveal prominent neutrophils in the epithelium and cryptitis with focal crypt abscesses, and no dysplasia. The patient is diagnosed with ulcerative colitis.

In addition to an increased lifetime risk of colon cancer, the patient is also at increased risk for which of the following tumors?

A. hepatocellular carcinoma

B. hepatoblastoma

C. desmoid tumors

D. small bowel lymphoma

E. cholangiocarcinoma

Answer(s): E

8. A 61-year-old man comes to your office for a checkup. He currently feels well and has no focal complaints. He has a past medical history significant for well-controlled hypertension, and his gallbladder was removed 3 years ago in the setting of acute cholecystitis. He does not smoke and drinks one to two alcoholic beverages per day. Family history is remarkable for colon cancer in his mother at age 45 and a brother at age 49. He has a sister who developed endometrial cancer at age 53. He has never undergone colon cancer screening and is interested in pursuing this. The patient's family history is strongly suggestive of which of the following?

A. familial adenomatous polyposis (FAP) syndrome

B. hereditary nonpolyposis colorectal cancer (HNPCC) syndrome

C. Peutz-Jeghers syndrome

D. Cronkhite-Canada syndrome

E. Turcot syndrome

Answer(s): B

9. A 50-year-old female presents to your office for evaluation of solid food dysphagia without weight loss. Symptoms have been present for 6 months and are progressive. The patient has had two episodes of near impaction, but copious water ingestion and repeated swallows allowed the food bolus to pass. She has never had to present to the ER for disimpaction. She drinks five to six beers per day, loves spicy foods, and smokes a pack of cigarettes daily with a total lifetime history of 30 pack-years. She has had intermittent heartburn symptoms for years and has not sought treatment. She takes hydrochlorothiazide for hypertension. Review of symptoms reveals chronic cough. Physical examination is unremarkable. Upper endoscopy reveals a distal esophageal stricture with inflammatory changes. Esophageal biopsies reveal benign mucosa with chronic inflammation. Gastric biopsies are unremarkable. Helicobacter pylori testing is negative. What is the most likely etiology of the patient's stricture?

A. alcohol ingestion

B. tobacco use

C. gastroesophageal reflux

D. hydrochlorothiazide

E. spicy food ingestion

Answer(s): C

10. A 50-year-old female presents to your office for evaluation of solid food dysphagia without weight loss. Symptoms have been present for 6 months and are progressive. The patient has had two episodes of near impaction, but copious water ingestion and repeated swallows allowed the food bolus to pass. She has never had to present to the ER for disimpaction. She drinks five to six beers per day, loves spicy foods, and smokes a pack of cigarettes daily with a total lifetime history of 30 pack-years. She has had intermittent heartburn symptoms for years and has not sought treatment. She takes hydrochlorothiazide for hypertension. Review of symptoms reveals chronic cough. Physical examination is unremarkable. Upper endoscopy reveals a distal esophageal stricture with inflammatory changes. Esophageal biopsies reveal benign mucosa with

chronic inflammation. Gastric biopsies are unremarkable. Helicobacter pylori testing is negative. What is the next best step in therapy for this patient?

A. esophageal dilation

B. histamine receptor antagonist therapy

C. PPI therapy

D. esophageal dilation with histamine receptor antagonist therapy

E. esophageal dilation with PPI inhibitor therapy

Answer(s): E

11. A 50-year-old female presents to your office for evaluation of solid food dysphagia without weight loss. Symptoms have been present for 6 months and are progressive. The patient has had two episodes of near impaction, but copious water ingestion and repeated swallows allowed the food bolus to pass. She has never had to present to the ER for disimpaction. She drinks five to six beers per day, loves spicy foods, and smokes a pack of cigarettes daily with a total lifetime history of 30 pack-years. She has had intermittent heartburn symptoms for years and has not sought treatment. She takes hydrochlorothiazide for hypertension. Review of symptoms reveals chronic cough. Physical examination is unremarkable. Upper endoscopy reveals a distal esophageal stricture with inflammatory changes. Esophageal biopsies reveal benign mucosa with chronic inflammation. Gastric biopsies are unremarkable. Helicobacter pylori testing is negative. The patient is at increased risk for which of the following illnesses?

A. esophageal squamous cell cancer

B. esophageal adenocarcinoma

C. gastric cancer

D. gastric lymphoma

E. duodenal adenocarcinoma

Answer(s): B

12. A 65-year-old man presents to your office for evaluation of abdominal pain. The patient states that he has epigastric pain that radiates to his back. The pain is worse with eating and improves with fasting. The pain has been present for 6 months and is gradually worsening. The patient has lost 15 lbs but feels his oral intake has been adequate. He complains of greasy stools and frequent thirst and urination. Examination reveals a thin male with temporal wasting and moderate abdominal pain with palpation. The patient consumes approximately 1015 beers per day and smokes a pack of cigarettes per day for the past 20 years.

What would be the best initial test to do in this patient?

A. spot fecal fat collection

B. 72-hour fecal fat collection

C. CT scan of the abdomen

D. ERCP

E. upper endoscopy

Answer(s): C

13. A 65-year-old man presents to your office for evaluation of abdominal pain. The patient states that he has epigastric pain that radiates to his back. The pain is worse with eating and improves with fasting. The pain has been present for 6 months and is gradually worsening. The patient has lost 15 lbs but feels his oral intake has been adequate. He complains of greasy stools and frequent thirst and urination. Examination reveals a thin male with temporal wasting and moderate abdominal pain with palpation. The patient consumes approximately 1015 beers per day and smokes a pack of cigarettes per day for the past 20 years.

On further questioning, the patient reports that he recently had a motor vehicle accident at night because he felt he could not see clearly. The most likely cause of this symptom is which of the following?

A. vitamin B12 deficiency

B. vitamin C deficiency

C. vitamin D deficiency

D. vitamin A deficiency

E. vitamin K deficiency

Answer(s): D

14. A 65-year-old man presents to your office for evaluation of abdominal pain. The patient states that he has epigastric pain that radiates to his back. The pain is worse with eating and improves with fasting. The pain has been present for 6 months and is gradually worsening. The patient has lost 15 lbs but feels his oral intake has been adequate. He complains of greasy stools and frequent thirst and urination. Examination reveals a thin male with temporal wasting and moderate abdominal pain with palpation. The patient consumes approximately 1015 beers per day and smokes a pack of cigarettes per day for the past 20 years.

On further evaluation, the patient is found to be diabetic. He has an elevated HgbA1C and fasting hyperglycemia. The patient is sent for diabetic teaching sessions and begun on insulin therapy, but is unable to achieve euglycemia. He experiences frequent bouts of symptomatic hypoglycemia requiring ER visits.

What is the most likely cause for these episodes?

A. insulin overdose

B. impaired glucagon production

C. inadequate oral intake

D. vitamin K deficiency

E. vitamin B12 deficiency

Answer(s): B

15. A 65-year-old man presents to your office for evaluation of abdominal pain. The patient states that he has epigastric pain that radiates to his back. The pain is worse with eating and improves with fasting. The pain has been present for 6 months and is gradually worsening. The patient has lost 15 lbs but feels his oral intake has been adequate. He complains of greasy stools and frequent thirst and urination. Examination reveals a thin male with temporal wasting and moderate abdominal pain with palpation. The patient consumes approximately 1015 beers per day and smokes a pack of cigarettes per day for the past 20 years.

The patient's abdominal pain worsens and his weight loss progresses despite therapy, and you suspect that he may have a malignancy. If a malignancy was present, which tumor marker would be most likely to be elevated in this patient?

A. carcinoembryonic antigen (CEA)

B. prostate-specific antigen (PSA)

C. cancer antigen (CA)-125

D. -Fetoprotein (AFP)

E. CA-19-9

Answer(s): E

16. A 60-year-old woman arrives at your office for a routine physical examination. During the course of her examination she asks you about osteoporosis. She is concerned about her risk for osteoporosis, as her mother suffered from multiple vertebral compression fractures at the age of 60. Your patient reports that she still smokes cigarettes ("although I know they are bad for me") and has one alcoholic beverage a week. She reports having had menopause 5 years ago and experiencing a deep venous thrombosis approximately 20 years ago. She is proud of the fact that she regularly exercises at the local fitness center. She has been taking 1500 mg of calcium with 800 IU of vitamin D every day. You suspect that she is at risk for osteoporosis.

Which of the following tests is best to detect and monitor osteoporosis?

A. plain film radiography

B. dual photon absorptiometry

C. single photon absorptiometry

D. dual-energy x-ray absorptiometry (DEXA)

E. quantitative CT scan

Answer(s): D

17. A 60-year-old woman arrives at your office for a routine physical examination. During the course of her examination she asks you about osteoporosis. She is concerned about her risk for osteoporosis, as her mother suffered from multiple vertebral compression fractures at the age of 60. Your patient reports that she still smokes cigarettes ("although I know they are bad for me")

and has one alcoholic beverage a week. She reports having had menopause 5 years ago and experiencing a deep venous thrombosis approximately 20 years ago. She is proud of the fact that she regularly exercises at the local fitness center. She has been taking 1500 mg of calcium with 800 IU of vitamin D every day. You suspect that she is at risk for osteoporosis. After performing the appropriate imaging study, you determine that your patient has osteoporosis. Of the following choices, which is risk factor most likely contributing to her osteoporosis?

A. active lifestyle

B. late menopause

C. cigarette smoking

D. frequency of alcohol intake

E. her intake of calcium and vitamin D

Answer(s): C

18. A 60-year-old woman arrives at your office for a routine physical examination. During the course of her examination she asks you about osteoporosis. She is concerned about her risk for osteoporosis, as her mother suffered from multiple vertebral compression fractures at the age of 60. Your patient reports that she still smokes cigarettes ("although I know they are bad for me") and has one alcoholic beverage a week. She reports having had menopause 5 years ago and experiencing a deep venous thrombosis approximately 20 years ago. She is proud of the fact that she regularly exercises at the local fitness center. She has been taking 1500 mg of calcium with 800 IU of vitamin D every day. You suspect that she is at risk for osteoporosis. After a thorough discussion with your patient, you determine that pharmacologic intervention would be beneficial given the severity of her osteoporosis. Which of the following is most appropriate for your patient?

A. estrogen replacement therapy

B. combined HRT with estrogen and progestin

C. alendronate

D. calcitonin intranasal spray

E. raloxifene

Answer(s): C

19. A 28-year-old male, well known to your clinic, presents for management of swelling, pain, and tenderness that has developed in his left ankle and right knee. It has persisted for 1 month. Your patient reports that he developed severe diarrhea after a picnic 1 month prior to the onset of his arthritis. During the interval between the diarrhea and onset of arthritis, he developed a "pink eye" that lasted for 4 days. He denies any symptoms of back pain or stiffness. You remember that he was treated with ceftriaxone and doxycycline for gonorrhea 2 years ago, which he acquired from sexual activity with multiple partners. Since that time, he has been in a monogamous relationship with his wife and has not had any genitourinary symptoms. He promises that he has been faithful to his wife and has not engaged in unprotected sexual activity outside his marriage. His physical examination is notable for a swollen left ankle, swollen right knee, and the absence of penile discharge or any skin lesions. Which of the following is the most likely diagnosis?

A. pseudogout

B. gout

C. reactive arthritis

D. resistant gonococcal arthritis

E. ankylosing spondylitis

Answer(s): C

20. A 28-year-old male, well known to your clinic, presents for management of swelling, pain, and tenderness that has developed in his left ankle and right knee. It has persisted for 1 month. Your patient reports that he developed severe diarrhea after a picnic 1 month prior to the onset of his arthritis. During the interval between the diarrhea and onset of arthritis, he developed a "pink eye" that lasted for 4 days. He denies any symptoms of back pain or stiffness. You remember that he was treated with ceftriaxone and doxycycline for gonorrhea 2 years ago, which he acquired from sexual activity with multiple partners. Since that time, he has been in a monogamous relationship with his wife and has not had any genitourinary symptoms. He promises that he has been faithful to his wife and has not engaged in unprotected sexual activity outside his marriage. His physical examination is notable for a swollen left ankle, swollen right knee, and the absence of penile discharge or any skin lesions. What would be the appropriate management for this patient's arthritis?

A. Screen him for the suspected disease with HLA-B27 testing.

B. Treat with daily indomethacin (150200 mg daily).

C. Start him on empiric antibiotics.

D. Start treatment with prednisone 10 mg daily.

E. Assume that the patient is not being honest and perform the appropriate urogenital testing to confirm gonorrhea.

Answer(s): B
